Operating Instructions

Digital Video Recorder

Model:

BTR-3104/250CD
BTR-3104/500CD
BTR-3104/750CD

BTR-3108/250CD
BTR-3108/500CD
BTR-3108/750CD

BTR-3116/250CD
BTR-3116/500CD
BTR-3116/750CD

SLD Security & Communications

Safety Instructions

EMC class

- ► This video recorder (DVR) is a class A device in accordance with EN 55022.
- ► This device may cause interference to other equipment in domestic use. In such cases the persons operating the DVR are required to provide appropriate countermeasures, for which they themselves bear the cost.

Importance of these Operating Instructions

- ► Please read the safety instructions and the other information contained in the Operating Instructions before connecting up and operating the DVR.
- ► The Operating Instructions should be kept in a safe place for later reference.

Ambient conditions for the DVR

- ► The DVR should be protected against excessive heat, dust, damp and vibration.
- ► The DVR may only be operated at temperatures between +5°C and +40°C, and up to a maximum air humidity of 90%.
- ► The DVR may only be operated indoors, and must be protected against incursion of water and damp.

Care of the DVR

- ► Never switch on the DVR when damp has penetrated it. In such cases, have the DVR checked by a qualified service engineer.
- ► Do not place any heavy objects on the DVR.
- ► Never cover the DVR ventilation slots.
- ► Never insert metallic objects or any other items into the vents. This may permanently damage the DVR.
- ► The housing may only be opened by authorised persons. Repairs may only be carried out by qualified service personnel.
- ► The DVR must be disconnected from the power supply before its housing is opened.

Getting started with the DVR

- ► When laying the connecting cables, make sure no weight is placed on them, that they are not kinked or damaged, and that no damp can penetrate them.

Cleaning the DVR

- ► The housing of the DVR may only be cleaned with a damp (not wet) cloth,
- ► Use only a mild detergent. Do not use solvent-containing detergents or petrol. This could permanently damage the surface finish.

Spare parts

- ► Use only original spare parts from Videor Technical E. Hartig GmbH.

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Overview

Package contents

- Digital video recorder (DVR)
- Power supply unit and mains cable
- Operating Instructions
- Software: Integrated Remote Station (IRS)
- Infrared remote control (S Type) including batteries
- Mouse
- Rubber pad
- Hard disk vibration dampers
- Screws and mounting brackets

Basis functions

- Recording video images using multiple cameras
- Event-based recording start
- Video playback
- Search for specific video sequences

Features

- JPEG-2000 compression (H.264)
- 4, 8 or 16 loop-through inputs / VGA, S-VHS/FBAS outputs
- Max. recording speed: 200 field images per sec (PAL)
- Duplex and triplex mode
- Memory capacity 250 GB / 500 GB / 750 GB
- Maximum video resolution 720 x 288 pixels (PAL)
- Various recording criteria possible
- Archiving / retrieving images via USB and CD-R
- Digital zoom function (2x)
- Integral Motion Detector
- Telemetry control functions via RS-485 port
- Network connection (Ethernet)

Requirements for operation

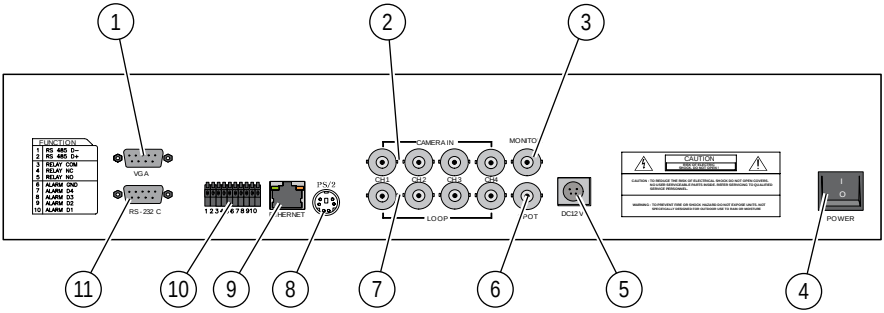
- Digital video recorder BTR connected
- At least one camera connected
- At least one monitor connected

Control options

- Front panel
- Remote control
- Mouse control
- Integrated Remote Station (IRS)
- DDNS service

Connections on the rear – BTR-3104

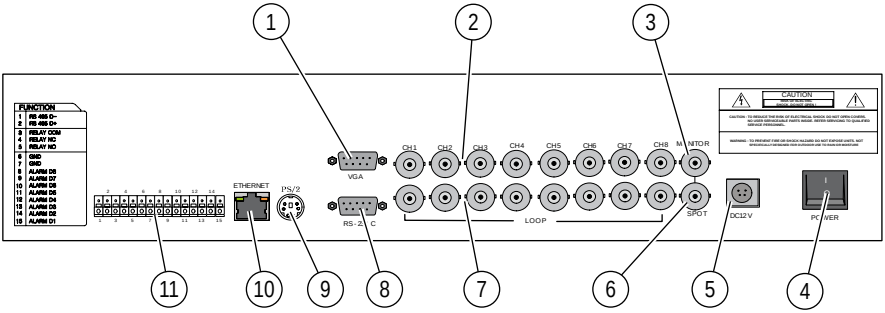
The following diagram and table describe the interfaces at the rear of BTR-3104:



No.	Designation	Functions/connections	Typical devices
1	VGA	PC monitor	PC monitor
2	CAMERA IN CH1-CH16	Maximum 16 video channels	Cameras
3	MONITOR	Monitor	Monitor
4	POWER	ON/OFF switch	-
5	Power supply	Power Supply	-
6	SPOT	Spot monitor	Monitor
7	LOOP CH1-CH16	Maximum 16 loop-through video channels	Cameras
8	PS/2	External interface	Mouse
9	ETHERNET	Network	Network cable
10	RS 485	Connection to the PTZ camera	PTZ cameras
	RELAY	Relay alarm output for external devices	Sirene, warning light
	ALARM	Sensor input	Sensors
11	RS-232 C	External interface	PC (operation via PC key-board)

Connections on the rear – BTR-3108

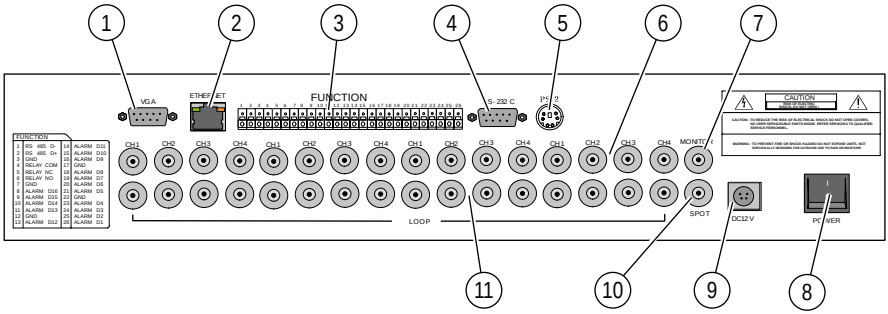
The following diagram and table describe the interfaces at the rear of BTR-3108:



No.	Designation	Functions/connections	Typical devices
1	VGA	PC monitor	PC monitor
2	CAMERA IN CH1-CH16	Maximum 16 video channels	Cameras
3	MONITOR	Monitor	Monitor
4	POWER	ON/OFF switch	-
5	Power supply	Power Supply	-
6	SPOT	Spot monitor	Monitor
7	LOOP CH1-CH16	Maximum 16 loop-through video channels	Cameras
8	RS-232 C	External interface	PC (operation via PC key-board)
9	PS/2	External interface	Mouse
10	ETHERNET	Network	Network cable
11	RS 485	Connection to the PTZ camera	PTZ cameras
	RELAY	Relay alarm output for external devices	Sirene, warning light
	ALARM	Sensor input	Sensors

Connections on the rear – BTR-3116

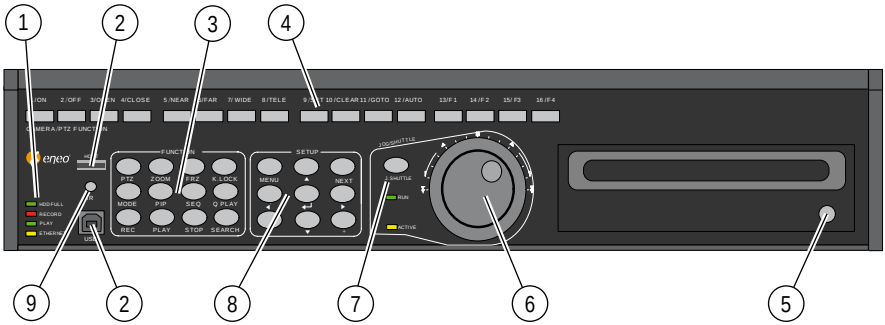
The following diagram and table describe the interfaces at the rear of BTR-3116:



No.	Designation	Functions/connections	Typical devices
1	VGA	PC monitor	PC monitor
2	ETHERNET	Network	Network cable
3	RS 485	Connection to the PTZ camera	PTZ cameras
	RELAY	Relay alarm output for external devices	Sirene, warning light
	ALARM	Sensor input	Sensors
4	RS-232 C	External interface	PC (operation via PC key-board)
5	PS/2	External interface	Mouse
6	CAMERA IN CH1-CH16	Maximum 16 video channels	Cameras
7	MONITOR	Monitor	Monitor
8	POWER	ON/OFF switch	-
9	Power supply	Power Supply	-
10	SPOT	Spot monitor	Monitor
11	LOOP CH1-CH16	Maximum 16 loop-through video channels	Cameras

Front panel controls

The following diagram and table describe the controls on the front panel of the DVR:



No.	Designation	Function	
1	HDD FULL	Lights up when the hard disk is full	
	RECORD	Lights up during recording	
	PLAY	Lights up during playback	
	ETHERNET	Lights up during network activities	
2	USB	USB interfaces (type A and type B)	
3	FUNCTION	Function keys	
4	1/....- 16/....	• Camera selection • Password input • PTZ functions	
5	CD-RW	Opens the integrated CD-RW writer	
6	Jog shuttle	• Image-by-image playback in playback mode (when the J. SHUTTLE button is pressed) • Changing numerical values in SYSTEM MENU • Screen navigation in zoom mode	
7	J. SHUTTLE	J. SHUTTLE button to activate the jog shuttle wheel	
		RUN	Lights up when the jog or shuttle function is activated
		ACTIVE	Lights up when the J. SHUTTLE button is pressed
8	MENU	Activating/exiting the SYSTEM MENU	
	↵ (ENTER)	Selects menu option / confirms entry	
	NEXT	Moves forward	
	▲ ▼ ◀ ▶	Menu navigation	
	+ -	Increases / decreases a value in the menu area	
9	IR	Infrared receiver	

Key to controls

Function keys

Marking	Meaning
PTZ	Activates PTZ camera functions
ZOOM	Zoom
FRZ	Freezing the screen contents (fixed image)
K. LOCK (KEY LOCK)	Activates key lock. To unlock, press the button for several seconds, and confirm with the password
MODE	Changing the image display modes
PIP	Display in picture-in-picture mode
SEQ	Activates image change in full-screen mode
Q. PLAY (QUICK PLAY)	Playback of the last recorded 180 images
REC	Alarm recording Note: Automatic alarm recording starts without taking the scheduler into consideration when you press the REC button on the digital video recorder or on the remote control.
PLAY	Starts the playback of recorded video data
STOP	Stops alarm recording
SEARCH	Activating/Exiting the SEARCH MENU

Key to controls, continued

Camera buttons / PTZ functions

After the PTZ button has been pressed, you can use the camera buttons and the arrow keys to control PTZ cameras. Using the numeric keypad, you may enter numerical values in the SYSTEM MENU (password input).

Marking	Meaning	
1 / ON	Camera 1 active	
	LIGHT ON	Light on
2 / OFF	Camera 2 active	
	LIGHT OFF	Light off
3 / OPEN	Camera 3 active	
	IRIS OPEN	Open iris
4 / CLOSE	Camera 4 active	
	IRIS CLOSE	Close iris
5 / NEAR	Camera 5 active	
	FOCUS NEAR	Focus near
6 / FAR	Camera 6 active	
	FOCUS FAR	Wide-angle
7 / WIDE	Camera 7 active	
	ZOOM IN	Zoom in
8 / TELE	Camera 8 active	
	ZOOM OUT	Zoom in
9 / SET	Camera 9 active	
	PRESET SET	Save preset value
10 / CLEAR	Camera 10 active	
	PRESET CLEAR	Clear preset value
11 / GOTO	Camera 11 active	
	PRESET GOTO	Go to preset value
12 / AUTO	Camera 12 active	
	AUTO SCAN	Automatic scan

Key to controls, continued

Camera buttons / PTZ functions, continued

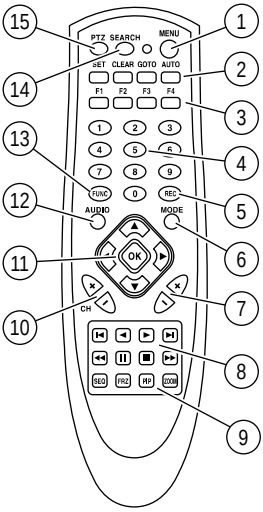
Marking	Meaning
13 / F1	Camera 13 active
	Function key F1 / User 1
14 / F2	Camera 14 active
	Function key F2 / User 2
15 / F3	Camera 15 active
	Function key F3 / User 3
16 / F4	Camera 16 active
	Function key F4 / User 4

Menu buttons / PTZ functions

Marking	Meaning	
▲	Menu navigation button	
	TILT UP	Tilt camera upward
▼	Menu navigation button	
	TILT DOWN	Tilt camera downward
◀	Menu navigation button	
	PAN LEFT	Pan camera to the left
▶	Menu navigation button	
	PAN RIGHT	Pan camera to the right

Remote control functions

The following diagram and table describe the controls of the remote control:



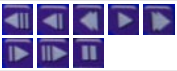
No.	Designation	Function
1	MENU	Activating/exiting the SYSTEM MENU
2	SET, CLEAR, GOTO, AUTO	PTZ camera functions
3	F1, F2, F3, F4	• Activates/inactivates screen icons • Change splitscreen mode
4	0 to 9	• Camera selection • Password input
5	REC	Alarm recording
6	MODE	Changing the image display modes
7	+ -	Increases / decreases a value in the menu area
8	⏮ ◀ ▶ ⏭ ⏪ ⏸ ⏹ ⏩	Playback functions
9	SEQ, FRZ, PIP, ZOOM	Function keys
10	CH + -	Change camera channel
11	▲ ▼ ◀ ▶	Menu navigation
12	AUDIO	No function
13	FUNC	No function
14	SEARCH	Activating/Exiting the SEARCH MENU
15	PTZ	PTZ camera functions on/off

Mouse control functions

Live mode functions

Icon	Function left mouse button	Function right mouse button
	REC	STOP
	PLAY	QUICK PLAY
	Open SEARCH MENU	-
	Open PTZ mode	-
	ZOOM	-
	FREEZE	-
	PIP	-
	Activates image change in full-screen mode	-
	No function	-
	KEY LOCK	-
	Open SYSTEM MENU	-
	NEXT	ENTER
	Increase numerical value	Decrease numerical value
	Image display modes	-

Play mode functions

Icon	Function left mouse button	Function right mouse button
	Playback functions	-
	REC	STOP
	ZOOM	-
	Open SYSTEM MENU	-
	No function	-
	Image display modes	-

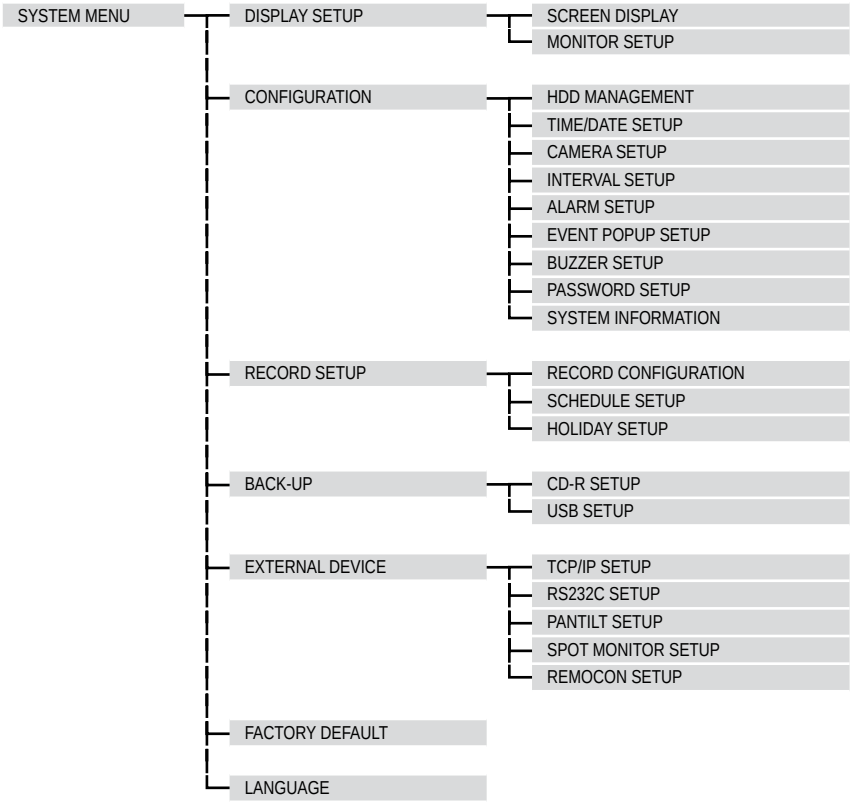
Mouse control – functions, continued

PTZ mode functions

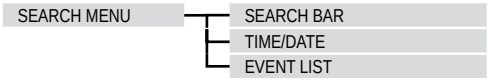
Icon	Function left mouse button	Function right mouse button
	Pan/Tilt movements	-
	ENTER	-
	Zoom in	Zoom out
	Focus near	Wide-angle
	MENU	NEXT
	Go to preset value	-
	Save preset value	-
	Increase numerical value	Decrease numerical value
	Clear preset value	-
	Automatic scan	-
	Quit PTZ mode	-

Menu overview

The following figure shows the structure of the SYSTEM MENU:



The following figure shows the structure of the SEARCH MENU:



Accessing the menu

Accessing the SYSTEM MENU

Requirement:

- Current camera image is displayed.

Step	Action	Access using	Key sequence
1	Activate SYSTEM MENU. Result: The password is requested.	Device	MENU
		Remote control	MENU
		Mouse control	Double-click right button >
2	Enter the password (maximum eight digits). Factory-set default password: ADMIN: blank MANAGER: 1 USER1 - USER8: 2 - 9		
3	Confirm entry.		↵ (ENTER)

Accessing the SEARCH MENU

Requirement:

- Current camera image is displayed.

Step	Action	Access using	Key sequence
1	Activate SEARCH MENU.	Device	SEARCH
		Remote control	SEARCH
		Mouse control	Double-click right button >

Getting started

Checklist for starting DVR operation

Step	Action	Menu path
1	Connect the peripheral devices in the required configuration.	
2	Switch on DVR and peripheral devices.	
3	Specify menu language.	SYSTEM MENU > LANGUAGE
3	Adjust date and time.	SYSTEM MENU > CONFIGURATION > TIME/DATE SETUP
4	Clear the hard disk.	SYSTEM MENU > CONFIGURATION > HDD MANAGEMENT > HDD SETUP > HDD CLEAR COMPLETE
5	Reinitialize the system.	SYSTEM MENU > FACTORY DEFAULT
6	Define passwords.	SYSTEM MENU > CONFIGURATION > PASSWORD SETUP
7	Set up network (option).	SYSTEM MENU > EXTERNAL DEVICE > TCP/IP SETUP and SYSTEM MENU > EXTERNAL DEVICE > RS232C SETUP
8	Register peripherals with DVR.	SYSTEM MENU > EXTERNAL DEVICE > ...
9	Set up event types and associated responses.	SYSTEM MENU > CONFIGURATION > ALARM SETUP and SYSTEM MENU > CONFIGURATION > EVENT POPUP SETUP and SYSTEM MENU > CONFIGURATION > BUZZER SETUP
10	Set up recording parameters and schedule.	SYSTEM MENU > RECORD SETUP > ...

Connecting the remote control and DVR

Step	Action	Menu path
1	Select remote control, e.g. S Typ.	SYSTEM MENU > EXTERNAL DEVICE > REMOCON SETUP

Switching on the DVR

Requirement:

- The peripheral devices are connected.

Step	Action
1	Switch on the digital video recorder at the ON/OFF switch.
2	Switch on monitor. Result: System starts up automatically and is ready to use.

Switching off the DVR

To avoid losing the video data you must ensure that the DVR is in the SYSTEM MENU when you switch it off.

Step	Action
1	Press the MENU button. Result: The digital video recorder is in the SYSTEM MENU.
2	Switch off the monitor.
3	Switch off the digital video recorder at the ON/OFF switch.

Defining scheduled entries

Note: Ex factory, the DVR is set to continuous recording (100 images per second, resolution 720 x 288 pixels).

Step	Action	Menu path
1	Activate the scheduler. Result: A week diagram in the form of a grid menu is displayed.	SYSTEM MENU > RECORD SETUP > SCHEDULE SETUP
2	Select the required day and time window.	
3	Define the recording mode.	+ / -

Deleting recordings

You can only delete all recordings. It is not possible to delete recordings of a specific time interval.

Step	Action	Menu path
1	Delete all recordings.	SYSTEM MENU > CONFIGURATION > HDD MANAGEMENT > HDD SETUP > HDD CLEAR COMPLETE
2	Enter the password and confirm it.	

Searching for recordings

Press the SEARCH button to activate the SEARCH MENU. There are three different methods to locate a video recording:

- SEARCH BAR
- TIME/DATE
- EVENT LIST

SEARCH BAR

The SEARCH BAR option permits all video data to be searched on a time bar.

Step	Action	Key sequence/menu path
1	Activate the SEARCH BAR option. Result: The time bar is displayed.	SEARCH MENU > SEARCH BAR
2	Use the arrow keys to select the required point as a percent value of the overall video recording.	
3	Confirm input.	↵ (ENTER)

TIME/DATE

The TIME/DATE search option permits video recordings to be searched on the basis of concrete time and date specifications.

Step	Action	Key sequence/menu path
1	Activate the TIME/DATE option. Result: Date and time of start and end of the video recording are displayed.	SEARCH MENU > TIME/DATE
2	Enter date and time to select the required point.	
3	Confirm input.	↵ (ENTER)

EVENT LIST

The EVENT LIST option can be used for locating events on the basis of certain criteria. For example:

- Movements recorded by a specific camera
- Alarm event of a specific alarm input

Step	Action	Key sequence/menu path
1	Option EVENT LIST aufrufen. Result: A chronologically sorted table with saved events (e.g. alarms) is displayed.	SEARCH MENU > EVENT LIST
2	Use the arrow keys to select the required point.	
3	Confirm entry.	↵ (ENTER)

Menu descriptions – SYSTEM MENU

The SYSTEM MENU has the following submenus:

DISPLAY SETUP	In the DISPLAY SETUP menu, you can ● define the base settings of the screen display in live mode and in playback mode ● select the resolution of the VGA monitor ● display a test image
CONFIGURATION	In the CONFIGURATION menu, you can ● configure hard disk parameters ● set time and date ● select camera settings (camera colour setup, motion detection, etc.) ● define the time intervals in live mode ● define the response of the alarm outputs ● select settings of the event popup windows ● define the buzzer setup ● manage the passwords ● display the DVR system information
RECORD SETUP	In the RECORD SETUP menu, you can ● define type and quality of the recording ● configure the time control (scheduler, holiday planning)
BACK-UP	In the BACK-UP menu, you can ● select the settings for a backup of video data on USB stick and CD ROM
EXTERNAL DEVICE	In the EXTERNAL DEVICE menu, you can ● select the network settings ● define the control of PTZ cameras ● define the type of remote control ● configure the display of camera images on the main monitor
FACTORY DEFAULT	In the FACTORY DEFAULT menu, you can reset all or selected settings of the SYSTEM MENU to their default state.
LANGUAGE	In the LANGUAGE menu, you can select the menu language.

DISPLAY SETUP – SCREEN DISPLAY

The SCREEN DISPLAY menu is used for displaying / hiding the individual display options (time/date, icons, etc.) in live and playback mode.

⇨ DISPLAY SETUP ⇨ SCREEN DISPLAY

Term	Menu item	Meaning
LIVE	TIME/DATE	Activates the display of time and date
	ICON DISPLAY	Activates the display of the status icons
	DVR STATUS	Activates the DVR status display
	REC/PLAY BAR	Activates the REC/PLAY bar
	CAMERA TITLE	Activates the display of the camera title
PLAYBACK	TIME/DATE	Activates the display of time and date
	DVR STATUS	Activates the DVR status display
	REC/PLAY BAR	Activates the REC/PLAY bar
	CAMERA TITLE	Activates the display of the camera title

DISPLAY SETUP – MONITOR SETUP

In the MONITOR SETUP menu, DVR and monitor are tuned to each other.

⇨ DISPLAY SETUP ⇨ MONITOR SETUP

Term	Menu item	Meaning
VGA SETUP	VGA RESOLUTION	Defines screen resolution and screen frequency of the optional VGA monitor.
COLOUR BAR TEST		Activates the test image Note: This function is not available with a VGA monitor

CONFIGURATION – HDD MANAGEMENT

In the HDD MANAGEMENT menu, you can

- see hardware information
- see information about video recordings
- format the hard disk

CONFIGURATION ⇨ HDD MANAGEMENT

Term	Menu item	Meaning	
HDD SETUP	BEGIN	Information about recording time, recording date, and storage location of the image data on the hard disk	
	RECORD		
	PLAY		
	HDD STATUS	Informs about the recording mode:	
		OVERWRITE	The digital video recorder overwrites old video data when the hard disk is full.
		NORMAL	The digital video recorder stops recording when the hard disk is full
	HDD CLEAR	Starts formatting after password input	
HDD INFORMATION	MASTER-1	Hardware information about the master drive	
	MASTER-2	Hardware information about the slave drive	
HDD CHANGE SETUP	SAVE DVR INFO	Saves DVR informations in removable hard disc mode	
	LOAD DVR INFO	Loads DVR informations in removable hard disc mode	

CONFIGURATION – TIME/DATE SETUP

In the TIME/DATE SETUP menu, you can set the system time. A correct setting of time and date is crucial for locating recorded video data.

CONFIGURATION ⇨ TIME/DATE SETUP

Term	Meaning	
YEAR	Configures date and time	
MONTH		
DAY		
HOUR		
MINUTE		
SECOND		
DATE FORMAT	Date representation:	
	EUROPEAN	DD / MM / YYYY
	ASIA	YYYY / MM / DD
	AMERICAN	MM / DD / YYYY
TIME FORMAT	Defines the time format (12 or 24 hours)	
MONTH FORMAT	Changes the representation of the month	

CONFIGURATION – CAMERA SETUP

In the CAMERA SETUP menu, you can

- select image and camera settings
- configure the motion detection

CONFIGURATION ⇨ CAMERA SETUP ⇨ CAMERA TITLE

Term	Meaning
CAMERA XX	Assigns a name to each camera

CONFIGURATION ⇨ CAMERA SETUP ⇨ CAMERA COLOR SETUP

Term	Meaning
CHANNEL	Defines the number of the camera
BRIGHTNESS	Adjusts the camera colour setup
CONTRAST	
SATURATION	
HUE	
CAMERA POSITION	Adjusts the camera image

CONFIGURATION ⇨ CAMERA SETUP ⇨ CAMERA ACTIVE SETUP

Term	Meaning	
CH	Defines the number of the camera	
STATUS	Shows the status of the camera channel:	
	ACTIVE	Digital video recorder receives image data from the camera
	LOSS	Digital video recorder does not receive image data from the camera
LIVE	Defines whether live images of the camera channel are displayed.	
REC	Defines whether a camera channel is recorded	

SYSTEM MENU, continued

CONFIGURATION ⇨ CAMERA SETUP ⇨ MOTION SETUP

Term	Menu item	Meaning	
MOTION CONFIGURATION	CHANNEL	Defines the number of the camera	
	SENSITIVITY GRADE	Defines the sensitivity of the motion detection (maximum sensitivity: 4)	
	MOTION DISPLAY TYPE	Defines the screen representation of moving areas:	
		OFF	
		BOX	
		CELL	
	RECORD DURATION	Defines the recording duration after a movement	
	NUMBER OF CELLS TO DETECT	Defines the minimum number of cells that must provide a signal before a movement is reported.	
MOTION MASK SETUP		To select/deselect motion-sensitive areas in the zone window: ● move with arrow keys ● confirm selection with ↵ (ENTER) Repeat these two steps until all desired blocks have been selected/deselected. The bright cells are active areas; the motion detection in the shaded cells is deactivated. Functions of the MENU button:	
		ALL ON	Selects all cells
		ALL OFF	Deselects all cells
		BLOCK ON	Blockwise selection of the areas under surveillance
		BLOCK OFF	Blockwise deselection of the areas under surveillance

CONFIGURATION – INTERVAL SETUP

In the INTERVAL SETUP menu, you can define the time interval between two image changes.

⇨ CONFIGURATION ⇨ INTERVAL SETUP

Term	Menu item	Meaning
SWITCHING INTERVAL	FULL SCREEN	Defines the frequency of the image changeover in full-screen mode
	PIP SCREEN	Defines the frequency of the image changeover in the PIP window
EVENT RECORD	EVENT UPDATE TIME	Defines the minimum time interval between two events

CONFIGURATION – ALARM SETUP

In the "ALARM SETUP" menu, you can configure the alarm inputs.

⇨ CONFIGURATION ⇨ ALARM SETUP

Term	Meaning	
CHANNEL	Defines the number of the camera	
ALARM INPUT	Contact method of alarm input:	
	__ (DISABLE)	Not possible
	N.O. (NORMAL OPEN)	Normally open
	N.C. (NORMAL CLOSE)	Normally closed
DURATION	Defines the duration of the alarm	

CONFIGURATION – EVENT POPUP SETUP

In the EVENT POPUP SETUP menu, you can configure the response of the recorder to events. The system responds to an event with a popup of the full screen of the related camera channel.

CONFIGURATION ⇨ EVENT POPUP SETUP

Term	Meaning	
CHANNEL	Defines the number of the camera	
POPUP ON/OFF	Activates the popup function upon an event	
EVENT	Defines the type of event to which the system responds with the popup function.	
	A (ALARM)	Alarm
	M (MOTION EVENT)	Motion
DURATION	Defines the time the popup is displayed	

CONFIGURATION – BUZZER SETUP

In the BUZZER SETUP menu, you can configure the audible functions of the recorder.

CONFIGURATION ⇨ BUZZER SETUP

Term	Meaning
ALL	Activates all options of this menu
KEY BEEP	Activates the key beep
VIDEO LOSS	Activates the buzzer when video data is missing
ALARM ACTIVE	Activates the buzzer when an alarm is reported
MOTION DETECT	Activates the buzzer when a movement is reported

CONFIGURATION – PASSWORD SETUP

In the PASSWORD SETUP menu, you can define user ID and password. The password should be changed when the recorder is put into operation. Contact Videor Technical when you cannot remember the password.

CONFIGURATION ⇨ PASSWORD SETUP

Term	Meaning
USER ID	User ID
USER PW	Current password, consisting of a sequence of 1 ... 8 figures
NEW PW	Box to enter a new password
CONFIRM	Box to confirm the new password

CONFIGURATION – SYSTEM INFORMATION

The SYSTEM INFORMATION provides information about hardware, firmware, product ID etc.

CONFIGURATION ⇨ SYSTEM INFORMATION

RECORD SETUP – RECORD CONFIGURATION

In the RECORD CONFIGURATION menu, you can define the recording parameters. The recording speed is shown as a quotient: 1/1 means that every image is recorded; 1/4 only every 4th image, for example.

⇨ RECORD CONFIGURATION ⇨ RECORD CONFIGURATION

Term	Meaning	
OVERWRITE	Activates the overwrite function when the hard disk is full	
MULTIPLEX	Toggles between DUPLEX mode and TRIPLEX mode:	
	DUPLEX	Playback, Ethernet
	TRIPLEX	Playback, recording, Ethernet
	Note: DUPLEX mode permits video data to be played back at optimum image frequency. However, simultaneously recording is not possible in DUPLEX mode.	
QUALITY	Defines the compression rate during video recording	
	BASIC	
	NORMAL	
	ENHANCED	
	FINE	
	SUPER FINE	
RESOLUTION	Defines the resolution of the video recording	
RECORD IN ALARM	Defines the recording rate in alarm mode	
RECORD IN MOTION	Defines the recording rate in motion mode	
CONTINUOUS RECORD	Defines the recording rate in continuous mode	

RECORD SETUP – SCHEDULE SETUP

In the SCHEDULE SETUP menu, you can define recording settings in a week mask.

⇨ RECORD CONFIGURATION ⇨ SCHEDULE SETUP

In the SCHEDULE SETUP menu, you can define the type of recording for every 2-hour time window. The following abbreviations are used here:

- A:ALARM : The system is in alarm mode
- M:MOTION : The system is in motion mode
- C:CONTINUOUS : The system is in continuous mode.

The following table explains the functions of the MODE button:

Term	Meaning
TIME CELL	Defines each individual time interval
WEEK	Defines all time windows of a day
TIMEZONE	Defines a specific time window for all days of a week
ALL	Defines all time windows for all days of a week
CLEAR ALL	Deletes page by page

RECORD SETUP – HOLIDAY SETUP

In the HOLIDAY SETUP menu, you can mark holidays and public holidays in a calendar. The recording settings on holidays correspond to the Sunday settings in the SCHEDULE SETUP menu.

⇨ RECORD CONFIGURATION ⇨ HOLIDAY SETUP

↵ (ENTER) can be used to identify days as holidays. The maximum number of holidays is 100.

The following table explains the functions of the MODE button:

Term	Meaning
MODE:EDIT HOLIDAY	Base mode
MODE:CLEAR MON DATA	Deletes all holiday entries of a month
MODE:CLEAR ALL DATA	Deletes all holiday entries

BACK-UP – CD-R SETUP

In the CD-R SETUP menu, you can copy video data to CD-ROM.

BACK-UP ⇨ CD-R SETUP

Term	Menu item	Meaning
HDD	START	Shows the end time of the video recording on the hard disk
	END	Shows the start time of the video recording on the hard disk
CD-R	START	Defines start time and start date of the video copy
	END	Shows end time and end date of the video copy
	SIZE	Defines the size in MB of the video copy that is to be written
	BURN	Start writing to CD

BACK-UP – USB SETUP

In the USB SETUP menu, you can copy video data to a USB stick.

BACK-UP ⇨ USB SETUP

Term	Menu item	Meaning
HDD	START	Shows the start time of the video recording on the hard disk
	END	Shows the end time of the video recording on the hard disk
USB MEDIA	START	Defines start time and start date of the video copy
	END	Shows end time and end date of the video copy
	SIZE	Defines the size in MB of the video copy that is to be copied
	BACKUP	Starts the copying process

EXTERNAL DEVICE – TCP/IP SETUP

In the TCP/IP SETUP menu, you can make all the settings that are necessary to ensure network access.

⇨ EXTERNAL DEVICE ⇨ TCP/IP SETUP ⇨ IP CONFIG SETUP

Term	Meaning
MAC ADDRESS	Shows the hardware address of the network access
IP ADDRESS	Defines the IP address of the PC
IP PORT	Defines the IP port
GATEWAY	Defines the gateway
SUBNET MASK	Defines the subnet mask
DHCP SETUP	Shows DHCP SETUP mode

⇨ EXTERNAL DEVICE ⇨ TCP/IP SETUP ⇨ DDNS SETUP

Term	Meaning	
DDNS ON/OFF	Activates/deactivates DDNS (dynamic DNS)	
DDNS SERVER	Defines DDNS server	
INTERVAL	Connecting interval between DDNS server and digital video recorder:	
	D (day)	Days
	H (hour)	Hours
	M (minute)	Minutes
REGISTER	Registers new IP	

EXTERNAL DEVICE ⇨ TCP/IP SETUP ⇨ CONNECTION SETUP

Term	Meaning
TIMEOUT	Defines time-out when accessing the digital video recorder via Internet
RETRY COUNT	Defines the number of retries

EXTERNAL DEVICE ⇨ TCP/IP SETUP ⇨ DHCP SETUP

Term	Meaning
DHCP MODE	You can select from two modes:
	AUTOMATIC
	MANUAL
DNS SERVER	Defines the DNS server
IP ADDRESS	Defines the IP address
SUBNET MASK	Defines the subnet mask
GATEWAY	Defines the gateway

SYSTEM MENU, continued

EXTERNAL DEVICE ⇨ TCP/IP SETUP ⇨ EVENT SERVER SETUP

Term	Meaning	
IP ADDRESS	Defines the IP address	
IP PORT	Defines the IP port	
EVENT SERVER TYPE	Defines sending mode:	
	OFF	Off-state
	EVENT	Reports on event
	MINUTE	Reports with delay
INTERVAL	Defines connecting interval	
EVENT GMT TYPE	Defines VCR local time	

EXTERNAL DEVICE ⇨ TCP/IP SETUP ⇨ NVS SETUP

Term	Meaning
BITRATE	Bitrate
GROUP OF PICTURES	Group of pictures
FRAME RATE	Frame rate
RESOLUTION	Resolution

EXTERNAL DEVICE – RS232C SETUP

In the RS232C SETUP menu, you can configure the RS232C interface.

⇨ EXTERNAL DEVICE ⇨ RS232C SETUP

Term	Meaning
SPEED	Defines the transmission speed (baud rate)
LENGTH	Defines the number of data bits
STOP BIT	Defines the number of stop bits
PARITY	Defines the type of the parity protocol:
	NONE
	ODD
	EVEN

EXTERNAL DEVICE – PANTILT SETUP

In the PANTILT SETUP menu, you can define parameters for PTZ cameras that are connected to the digital video recorder. This includes specification of

- PTZ camera model and technical specifications
- speed settings

The system knows standard PTZ cameras, such as PELCO D. Implemented protocols exist for such cameras. For other camera types, you must create the protocol yourself.

⇨ EXTERNAL DEVICE ⇨ PANTILT SETUP ⇨ COMMAND SETTING

Term	Meaning
CHANNEL	Defines the number of the camera
MODEL	PTZ camera according to the specified list
PTZ ID	Defines an unambiguous ID of the PTZ camera
BAUDRATE	Defines the baud rate
CMD DELAY	Defines the command delay

⇨ EXTERNAL DEVICE ⇨ PANTILT SETUP ⇨ SPEED SETUP

Term	Meaning
PAN SPEED	Defines the speed of camera functions
TILT SPEED	
ZOOM SPEED	
FOCUS SPEED	

EXTERNAL DEVICE – SPOT MONITOR SETUP

In the SPOT MONITOR SETUP menu, you can define parameters for the connected spot monitor.

⇨ EXTERNAL DEVICE ⇨ SPOT MONITOR SETUP

Term	Meaning
SWITCHING INTERVAL	Defines the changeover time between camera channels
ALARM POP-UP	Activates the popup function upon an alarm
MOTION POP-UP	Activates the popup function upon a movement
EVENT POP-UP DURATION	Defines the duration of the popup function

EXTERNAL DEVICE – REMOCON SETUP

In the REMOCON SETUP menu, you can define the used remote control.

⇨ EXTERNAL DEVICE ⇨ REMOCON SETUP

Term	Meaning
REMOCON TYPE	Define typ of the used remote control, e.g. S TYP

FACTORY DEFAULT

In the FACTORY DEFAULT menu, you can reset the system to the delivery state. All previously made settings will be lost. The manufacturer recommends an initialization of the factory settings after the installation of a new hard disk, or after major system modifications.

FACTORY DEFAULT

Term	Meaning
ALL	Activates all menu options at the same time
SCREEN DISPLAY	Activates the reinitialization of the SCREEN DISPLAY menu
CAMERA SETTING	Activates the reinitialization of the CAMERA COLOUR SETUP menu
MOTION SETUP	Activates the reinitialization of the MOTION SETUP menu
PANTILT SETUP	Activates the reinitialization of the PANTILT SETUP menu
SCHEDULE SETUP	Activates the reinitialization of the SCHEDULE SETUP menu
CONFIGURATION	Activates the reinitialization of the CONFIGURATION menu
RUN	Requests a confirmation (ENTER) for reinitialization

LANGUAGE

In the LANGUAGE menu, you can define the language of the SYSTEM MENU. You can select from ten languages.

LANGUAGE

Using Integrated Remote Station

The Integrated Remote Station (IRS) software permits the following, using a network connection:

- view current video images
- search, view and edit recorded video data
- assign certain DVR settings
- remote control of PTZ functions
- create a backup of records on your remote PC

Requirements:

- The network connection is set up.
- A PC with network access to the DVR must be available.
- The IRS software must be installed on the PC (see enclosed software CD).

Using Integrated Remote Station

Step	Action
1	Ask your system administrator about the current access data.
2	Start IRS software.
3	Open the IRS SETUP menu.
4	Enter your access data.
5	Enter the DVR Login ID (admin) and Password (blank, unless otherwise noted) and confirm your entries. Result: The functionalities of the IRS software are available.

Menu descriptions – Integrated Remote Station

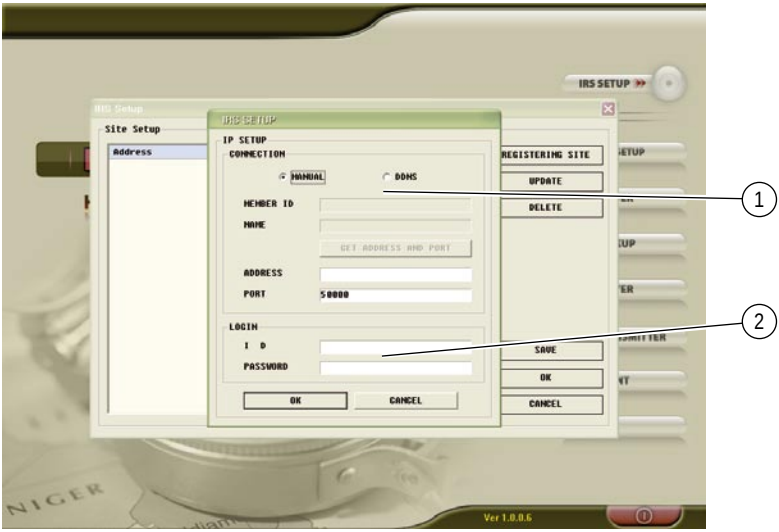
IRS main menu

The following diagram and table set out the main menu of the Integrated Remote Station software:

No.	Designation	Function
1	IRS SETUP	Permit entry of information for IRS network connection
2	DVR SETUP	Permit change of DVR settings over a network
3	VIEWER	Permit live image display on remote PC (JPEG2000)
4	BACKUP	Permit to back up recordings on remote PC (JPEG2000)
5	PLAYER	Permit to playback and edit recordings on PC
6	TRANSMITTER	Permit remote control of DVR with virtual key functionalities (H.264)
7	CLIENT	Permit transmission of playback and live video data on remote PC (JPEG2000), PTZ control and backup functionalities
8	CMS	Permit multi access to show live images of many DVR (JEPG2000)

IRS SETUP

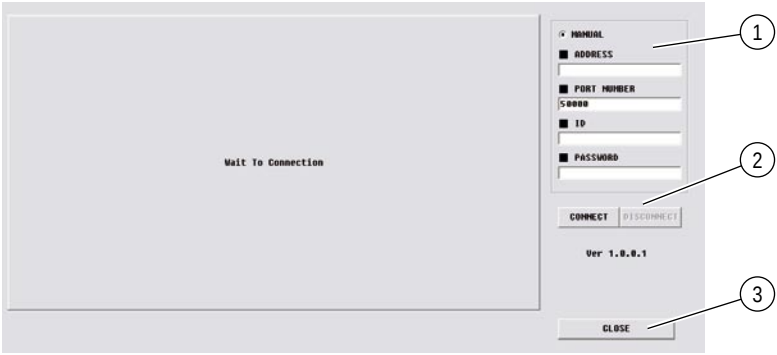
The following diagram and table set out the options of the IRS SETUP menu:



No.	Designation	Function	
1	CONNECTION	MANUAL	Permit manual input of IP address and IP port
		DDNS	Permit use of IP address and port number that is registered in DDNS Server
		MEMBER ID	Input member ID that you registered in DDNS Server
		NAME	DVR name that is registered in DDNS Server
		ADDRESS	IP address of DVR (manual entry)
		PORT	IP port of DVR (manual entry)
2	LOGIN	ID	ID of DVR
		PASSWORD	Password of DVR

DVR SETUP

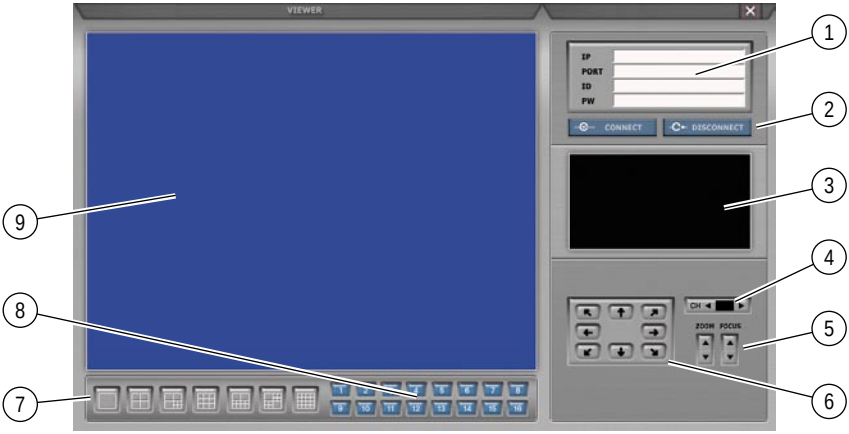
The following diagram and table set out the options of the DVR SETUP menu:



No.	Designation	Function
1	MANUAL	Permit manual input of IP address and IP port
	ADDRESS	IP address of DVR
	PORT NUMBER	IP port of DVR
	ID	Login ID of DVR
	PASSWORD	Password of DVR
2	CONNECT	Establish the network connection to DVR
	DISCONNECT	Cut the network connection to DVR
3	CLOSE	Quit DVR SETUP menu

VIEWER

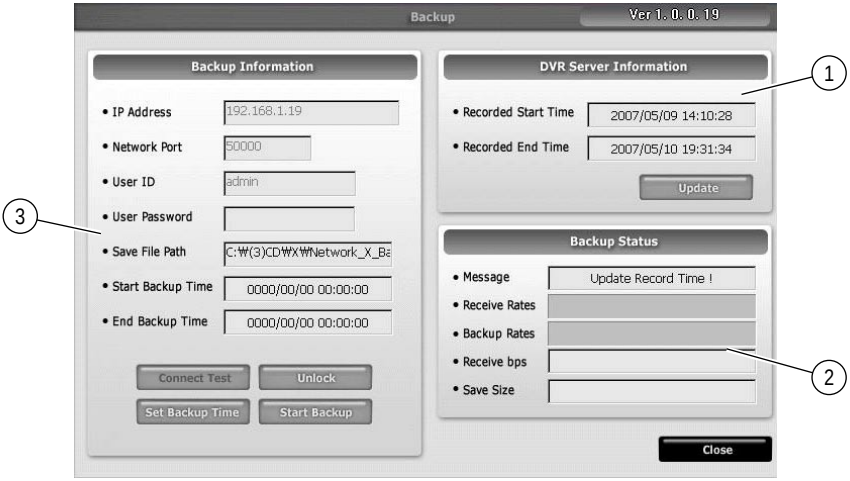
The following diagram and table set out the options of the VIEWER menu:



No.	Designation	Function
1	IP, PORT, ID, PW	Network information
2	CONNECT	Establish the network connection to DVR
	DISCONNECT	Cut the network connection to DVR
3	Display	System information: Connection status, operating information
4	CH	Change camera channel
5	ZOOM	Zoom in/out
	FOCUS	Close-up/wide-angle
6		PTZ camera functions
7		Change splitscreen mode
8	to	Select camera channel
9	Display	Monitoring image

BACKUP

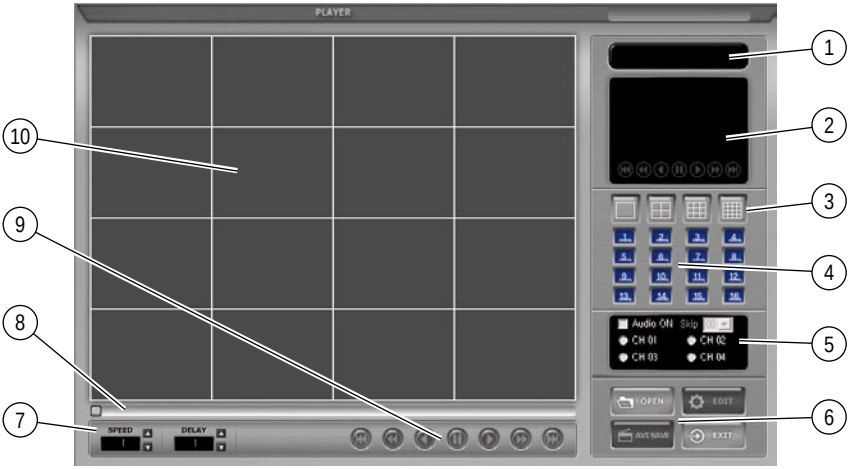
The following diagram and table set out the options of the BACKUP menu:



No.	Designation	Function
1	DVR Server Information	Time/date of ● record start ● record end
2	Backup Status	Backup status display
3	Backup Information	● Network settings ● Save file path ● Time/date of record start and end

PLAYER

The following diagram and table set out the options of the PLAYER menu:



No.	Designation	Function
1	Display	Current time
2	Display	Start time and end of recorded data
3		Change splitscreen mode
4	to	Select camera channel
5	CH 1 / CH 4	Skip function in multiscreen mode
6	OPEN	Open backup files
	EDIT	Edit video data
	AVI SAVE	Save backup images in avi format
	EXIT	Quit
7	SPEED, DELAY	Adjust playback speed
8	Display	Timeline for selecting a single time slot
9		Playback functions
10	Display	Monitoring image

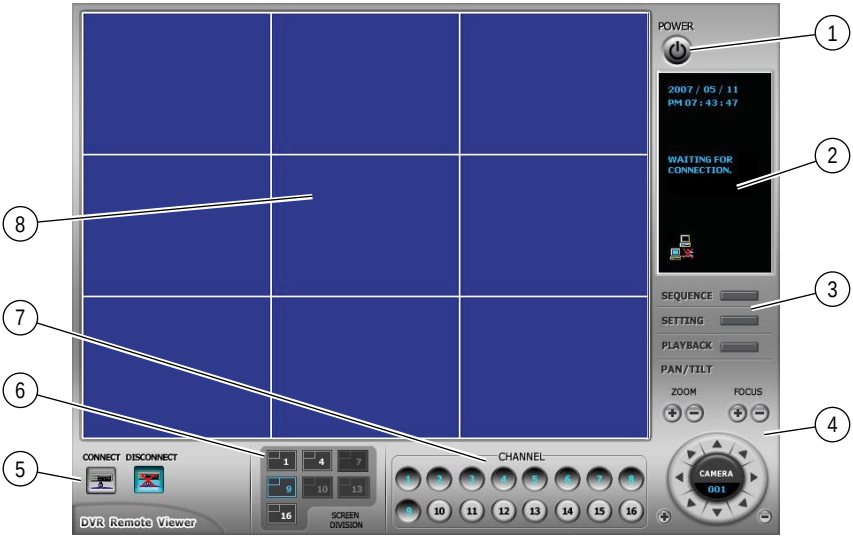
TRANSMITTER

The following diagram and table set out the options of the TRANSMITTER menu:

No.	Designation	Function
1		Quit
2	IP, PORT, ID, PW	Network information
3	CONNECT	Establish the network connection to DVR
	DISCONNECT	Cut the network connection to DVR
	SETUP	Open NVS Setup
4	Display	System information: Connection status, operating information
5	CH	Change camera channel
6	ZOOM	Zoom in/out
	FOCUS	Close-up/wide-angle
7		PTZ functions
8	Display	Playback navigation
9	ZOOM, FRZ, K.LOCK, MODE, PIP, SEQ, Q.PLAY	Function buttons, *see also „Key to controls“*
10	REC, STOP, PLAY, SEARCH	Function buttons, *see also „Key to controls“*
11	CAMERA	Camera selection/PTZ functions, *see also „Key to controls“*
12	SETUP	Menu buttons, *see also „Key to controls“*
13	Display	Monitoring image

CLIENT

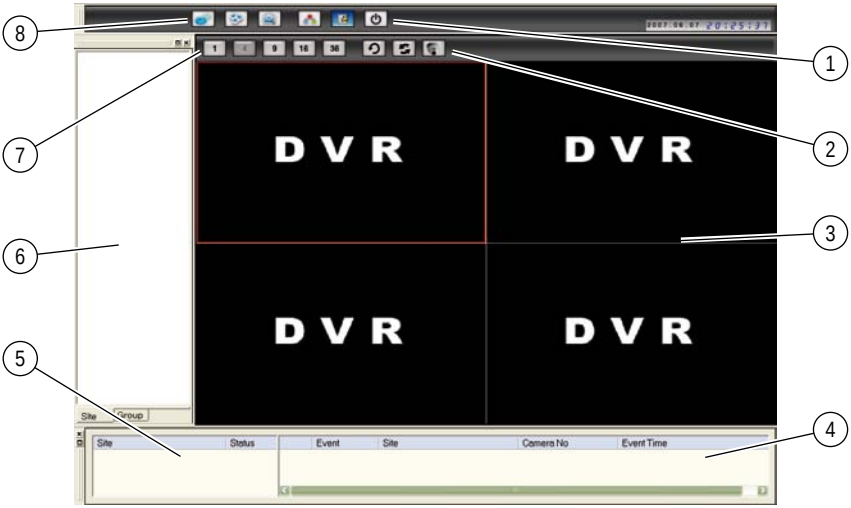
The following diagram and table set out the options of the CLIENT menu:



No.	Designation	Function	
1	POWER	Quit	
2	Display	System information: time/date, connection status, operating information	
3	SEQUENCE	Set image sequence settings	
	SETTING	Open software configuration screen	
	PLAYBACK	Open playback screen	
4	PAN/TILT	PTZ camera functions	
		ZOOM	Zoom in/out
		FOCUS	Close-up/wide-angle
5	CONNECT	Establish the network connection to DVR	
	DISCONNECT	Cut the network connection to DVR	
6	SCREEN DIVISION	Change splitscreen mode	
7	CHANNEL	Select camera channel	
8	Display	Monitoring image	

CMS

The following diagram and table set out the options of the CMS menu:



No.	Designation	Function
		Show/hide camera directory tree
1		Show/hide event information area and network information area
		Quit
		Define image sequence
2		Set automatic image sequence
		PTZ camera functions
3	Display	Monitoring image
4	Display	Event information of DVR
5	Display	Network information
6	Display	Camera directory tree
7		Change splitscreen mode
		CMS settings
8		Group camera channels
		Playback and search video data

Using DDNS Service

The DDNS Service permits the following functions:

- register your DVR for DDNS
- some online functionalities of the IRS software package are available

Requirements:

- A PC with network access must be available.
- A web browser must be installed on the PC.

Register DVR with direct network access via modem for DDNS Service

Step	Action	Button/menu path
1	Start web browser and visit the following web page: www.j2kip.com Result: The DDNS Service main menu is opened.	
2	Register as a user. For this purpose, fill in the registry form.	Member Register > .....
	Confirm your entry. Result: A list of all registrated DVR is displayed.	Confirm
3	Register your DVR for DDNS. ● DVR Name ● MAC Address ● IP Address ● IP Port Result: Your DVR is listed on DDNS web server.	DVR Add
4	DDNS settings at your DVR.	see instruction *„DDNS settings at your DVR“*
5	Click the Refresh-Button of your web browser. Result: DDNS Service automatically catches your DVR IP address and Port number.	Refresh
6	Before using the web viewer, add the DDDS Service webpage (www.j2kip.com) on Trusted Sites of your browser. Result: Some online functionalities of the IRS software package now are available.	Internet Explorer 7 > Tools > Internet Options > Security > Trusted Sites > Sites; Security level: low

Using DDNS Service, continued

DDNS settings at your DVR

Step	Action	Menu path
1	Using front panel or remote control, open the IP CONFIG SETUP menu at your DVR and inspect the network settings.	SYSTEM MENU > EXTERNEL DEVICE > TCP/IP SETUP > IP CONFIG SETUP
2	Using front panel or remote control, open the DDNS SETUP menu.	SYSTEM MENU > EXTERNEL DEVICE > TCP/IP SETUP > DDNS SETUP
3	Toggle DDNS ON/OFF to ON.	ON
4	Select REGISTER and confirm.	↵ (ENTER)
5	Quit the SYSTEM MENU of your DVR. Result: DDNS is available.	

Menu descriptions – DDNS Service

DDNS Service main menu

The following diagram and table set out the main menu of the DDNS Service:

No.	Designation	Function
1	DVR Add	Register your DVR for DDNS
2	Display	List of all registrated DVR
3	DVR SETUP	Permit change of DVR settings over a network
	VIEWER	Permit live image display on remote PC (JPEG2000)
	BACKUP	Permit to back up recordings on remote PC (JPEG2000)
	PLAYER	Permit to playback and edit recordings on PC
	TRANSMITTER	Permit remote control of DVR with virtual key functionalities (H.264)
4	MY DVR REGISTER	Register your DVR for DDNS
5	MY DVR LIST	List of all registrated DVR
6	MEMBER REGISTER	User registration

Specifications BTR-3104

Model	BTR-3104/250CD	BTR-3104/500CD	BTR-3104/750CD
EDP No.	71987	71990	77043
Operation mode	TRIPLEX		
Video standard	PAL/NTSC (auto detection)		
Video inputs	4x 1 Vss, (F)BAS, 75 Ohm, BNC (75 Ohm termination or loop-through)		
Main outputs	FBAS, VGA		
Video outputs	1 Vss (F)BAS, (PAL: 50 field image per sec, NTSC: 60 field image per sec), 75 Ohm, BNC; VGA		
Spot monitor	FBAS		
Audio inputs	no		
Alarm inputs	4, inputs programmable as NC/NO		
Motion detector	Programmable 16 x 12 (192) grid, 4 sensitivity settings		
Alarm outputs	1x directional contact		
Recording resolution	max. 720 x 288 (PAL)		
Compression method	JPEG-2000, (resolution), H.264 (network transfer)		
Picture size	Basic: 14 KB, Normal: 19 KB, Enhanced: 24 KB, Fine: 29 KB, Super fine: 32 KB (bei 720 x 288 pixel)		
Recording rate	max. 200 field images per sec		
Recording speed	200 field images per sec at 360 x 144 pixel, 100 field images per sec at 360 x 288 pixel, 50 field images per sec at 720 x 288 pixel (PAL)		
Recording medium	SATA hard disk, built-in CD-RW writer		
Hard disk capacity (max. internal)	1000 GB		
Hard disk capacity (internal)	250 GB	500 GB	750 GB
Playback	Full screen, 4 channel split, PIP, sequence, digital zoom, freeze at live modus		
Zoom function	2x		
Writer integrated	CD		
Export of picture data	2x USB A&B interface 1.1, CD writer. Network data export: AVI & JPG		
Remote control (external)	Remote control, mouse		
Remote access	Remote software (included)		
Search function	for time, alarm and event (Jog Shuttle)		
Menu languages	German, English, Spanish, French, Italian, Portuguese, Dutch, Danish, Estonian, Lithuanian		
Ethernet port	10Base-T, 100Base-TX, RJ-45		
External memory port	USB		

Specifications BTR-3104, continued

Model	BTR-3104/250CD	BTR-3104/500CD	BTR-3104/750CD
Backup	USB stick by 2 GB		
Ports	RS-232, RS-485, (PTZ control), RS-232C (PC)		
Security against unauthorised use	Key locking, 3 user groups with programmable access		
Power Supply	100 VAC~230VAC, 50/60Hz		
Power consumption	Approx. 80 W		
Temperature range	5°C to 40°C		
Housing	Metal with plastic front panel		
Colour	Black		
Dimensions (H x W x D)	88 x 436 x 396 mm		
Weight	Approx. 8.5 kg		
Specials	Display of residual record duration. Display at menu		

Accessories

EDP No.	Short description
71950 / HDD-250J	Hard disk 250GB, SATA for DPR-2016 and BTR-31xx series
71956 / HDD-500J	Hard disk 500GB, SATA for DPR-2016 and BTR-31xx series

Specifications BTR-3108

Model	BTR-3108/250CD	BTR-3108/500CD	BTR-3108/750CD
EDP No.	71988	72662	77044
Operation mode	TRIPLEX		
Video standard	PAL/NTSC (auto detection)		
Video inputs	8x 1 Vss, (F)BAS, 75 Ohm, BNC (75 Ohm termination or loop-through)		
Main outputs	FBAS, VGA		
Video outputs	1 Vss (F)BAS, (PAL: 50 field image per sec, NTSC: 60 field image per sec), 75 Ohm, BNC; VGA		
Spot monitor	FBAS		
Audio inputs	no		
Alarm inputs	8, inputs programmable as NC/NO		
Motion detector	Programmable 16 x 12 (192) grid, 4 sensitivity settings		
Alarm outputs	1x directional contact		
Recording resolution	max. 720 x 288 (PAL)		
Compression method	JPEG-2000, (resolution), H.264 (network transfer)		
Picture size	Basic: 14 KB, Normal: 19 KB, Enhanced: 24 KB, Fine: 29 KB, Super fine: 32 KB (bei 720 x 288 pixel)		
Recording rate	max. 400 field images per sec		
Recording speed	400 field images per sec at 360 x 144 pixel, 200 field images per sec at 360 x 288 pixel, 100 field images per sec at 720 x 288 pixel (PAL)		
Recording medium	SATA hard disk, built-in CD-RW writer		
Hard disk capacity (max. internal)	1000 GB		
Hard disk capacity (internal)	250 GB	500 GB	750 GB
Playback	Full screen, 4/6/8 channel split, PIP, sequence, digital zoom, freeze at live modus		
Zoom function	2x		
Writer integrated	CD		
Export of picture data	2x USB A&B interface 1.1, CD writer. Network data export: AVI & JPG		
Remote control (external)	Remote control, mouse		
Remote access	Remote software (included)		
Search function	for time, alarm and event (Jog Shuttle)		
Menu languages	German, English, Spanish, French, Italian, Portuguese, Dutch, Danish, Estonian, Lithuanian		
Ethernet port	10Base-T, 100Base-TX, RJ-45		
External memory port	USB		

Specifications BTR-3108, continued

Model	BTR-3108/250CD	BTR-3108/500CD	BTR-3108/750CD
Backup	USB stick by 2 GB		
Ports	RS-232, RS-485, (PTZ control), RS-232C (PC)		
Security against unauthorised use	Key locking, 3 user groups with programmable access		
Power Supply	100 VAC~230VAC, 50/60Hz		
Power consumption	Approx. 80 W		
Temperature range	5°C to 40°C		
Housing	Metal with plastic front panel		
Colour	Black		
Dimensions (H x W x D)	88 x 436 x 396 mm		
Weight	Approx. 8.5 kg		
Specials	Display of residual record duration. Display at menu		

Accessories

EDP No.	Short description
71950 / HDD-250J	Hard disk 250GB, SATA for DPR-2016 and BTR-31xx series
71956 / HDD-500J	Hard disk 500GB, SATA for DPR-2016 and BTR-31xx series

Specifications BTR-3116

Model	BTR-3116/250CD	BTR-3116/500CD	BTR-3116/750CD
EDP No.	71989	77042	77045
Operation mode	TRIPLEX		
Video standard	PAL/NTSC (auto detection)		
Video inputs	16x 1 Vss, (F)BAS, 75 Ohm, BNC (75 Ohm termination or loop-through)		
Main outputs	FBAS, VGA		
Video outputs	1 Vss (F)BAS, (PAL: 50 field image per sec, NTSC: 60 field image per sec), 75 Ohm, BNC; VGA		
Spot monitor	FBAS		
Audio inputs	no		
Alarm inputs	16, inputs programmable as NC/NO		
Motion detector	Programmable 16 x 12 (192) grid, 4 sensitivity settings		
Alarm outputs	1x directional contact		
Recording resolution	max. 720 x 288 (PAL)		
Compression method	JPEG-2000, (resolution), H.264 (network transfer)		
Picture size	Basic: 14 KB, Normal: 19 KB, Enhanced: 24 KB, Fine: 29 KB, Super fine: 32 KB (bei 720 x 288 pixel)		
Recording rate	max. 400 field images per sec		
Recording speed	400 field images per sec at 360 x 144 pixel, 200 field images per sec at 360 x 288 pixel, 100 field images per sec at 720 x 288 pixel (PAL)		
Recording medium	SATA hard disk, built-in CD-RW writer		
Hard disk capacity (max. internal)	1000 GB		
Hard disk capacity (internal)	250 GB	500 GB	750 GB
Playback	Full screen, 4/6/8/9/13/16 channel split, PIP, sequence, digital yoom, freeze at live modus		
Zoom function	2x		
Writer integrated	CD		
Export of picture data	2x USB A&B interface 1.1, CD writer. Network data export: AVI & JPG		
Remote control (external)	Remote control, mouse		
Remote access	Remote software (included)		
Search function	for time, alarm and event (Jog Shuttle)		
Menu languages	German, English, Spanish, French, Italian, Portuguese, Dutch, Danish, Estonian, Lithuanian		
Ethernet port	10Base-T, 100Base-TX, RJ-45		
External memory port	USB		

Specifications BTR-3116, continued

Model	BTR-3116/250CD	BTR-3116/500CD	BTR-3116/750CD
Backup	USB stick by 2 GB		
Ports	RS-232, RS-485, (PTZ control), RS-232C (PC)		
Security against unauthorised use	Key locking, 3 user groups with programmable access		
Power Supply	100 VAC~230VAC, 50/60Hz		
Power consumption	Approx. 80 W		
Temperature range	5°C to 40°C		
Housing	Metal with plastic front panel		
Colour	Black		
Dimensions (H x W x D)	88 x 436 x 396 mm		
Weight	Approx. 8.5 kg		
Specials	Display of residual record duration. Display at menu		

Accessories

EDP No.	Short description
71950 / HDD-250J	Hard disk 250GB, SATA for DPR-2016 and BTR-31xx series
71956 / HDD-500J	Hard disk 500GB, SATA for DPR-2016 and BTR-31xx series

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Notes on disposal

Correct disposal of this DVR

WEEE (Waste Electrical & Electronic Equipment)

Applicable in the member states of the European Union and other European countries with a separate collection system

The marking on the DVR and on the documentation stipulates that it must not be thrown away in normal domestic waste at the end of its useful life.

General rules

- ► Avoid uncontrolled waste disposal: Please dispose of this DVR separately from other waste, so as to avoid posing a hazard to the environment and to human health.
- ► Recycle the DVR in order to aid the sustainable reuse of material resources.

Private users

- ► Contact the retailer from whom you purchased the DVR, or your competent local authority to find out how you can recycle the DVR in an environmentally friendly way.

Commercial users

- ► This DVR must not be thrown away with trade waste. To clarify the conditions of disposal, check your purchase contract or contact your supplier.

SLD Security & Communications
The Old Forge, Ockham Lane, Ockham, Surrey GU236PH England
Phone +44.1483225633 · Fax +44.1483225634
sales@sld.co.uk · www.sld.co.uk